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ENERGY
2000

AN ENERGY EFFICIENT ONTARIO

ENERGY EFFICIENCY PROGRAMS FOR INDUSTRY

BACKGROUND

Ontario's industries will spend some \$3.1-billion on fuel and electricity during 1986. This represents 47 per cent of the total industrial fuel and electricity bill for all of Canada. While Ontario's industrial base is highly energy-intensive, much of the energy used in this sector is currently wasted. There is thus considerable scope for energy improvements in this area.

Energy efficiency performance in Canada is lagging behind other countries, such as Japan and the United States. Ontario industries must become more energy-efficient in order to compete in the international marketplace.

PROGRAM DESCRIPTION

Through on-site energy surveys, funding assistance for follow-up engineering work, showcase demonstrations of energy-efficiency improvements, and the provision of reliable, objective energy information, the program will encourage greater energy efficiency and improved energy use throughout Ontario's industrial sector.

Beginning in early 1987, the three-year, \$5-million program is designed to improve the competitiveness of Ontario industry by focusing on better energy management as a key factor in reducing production costs. The three major components of the program are detailed below.

PROGRAM COMPONENTS

1. Industrial Energy Services Program


- . A detailed technical service designed to analyze existing common processes, major equipment, and make recommendations on general manufacturing operations and total site utilization of energy in Ontario's industrial sector.
- . On-site assessments to determine the energy efficiencies of main processes and sub-systems, performance of major equipment and the potential for replacement with new systems.
- . Free surveys to industries with total annual energy costs in excess of \$50,000.
- . Targetted workshops for small industrial firms not qualifying for free surveys.
- . Computerized process simulation, to determine the best possible uses of energy in a given operation.
- . An Energy Support Fund will provide grants for both feasibility studies and project engineering. Based on the company's annual energy costs, the grant will provide up to 75 per cent of feasibility study costs, and up to 25 per cent of project engineering costs.

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2. Showcase Demonstrations

i Energy Monitoring Program

- . Joint process energy monitoring program to be undertaken with Ontario Hydro.
- . An Energy Monitoring Program designed to increase industry's awareness of the potential energy efficiency improvements available, by providing a system that accurately measures energy use throughout the entire plant and production process.
- . Four demonstrations planned for 1986-87, and funding assistance will be 50 per cent of the total eligible installed costs for each of the four demonstration projects.

ii. Application Demonstrations

- . Responding to individual demonstration projects which are past the R&D stage, but where the technology is not widely applied.
- . Selected demonstration projects to provide market entry assistance, to support technologies which are commercially available but not widely applied.
- . This program provides a link to the Ministry's Enersearch Program and completes the development cycle of new technology.
- . Applications under this program will be eligible for joint federal/provincial assistance.

3. Marketing Activities

- . Distributing energy efficiency information to industry to increase awareness about available products, services and applications.
- . Includes the production of a Directory of Energy Products and Services for Industry.
- . Includes participation with displays and literature, in industrial energy conferences and seminars.

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GOVERNMENT OPERATIONS

PUBLIC INSTITUTIONS

BACKGROUND

In 1975, the Ontario Government introduced an off-oil and energy conservation program for its own buildings. The 9,000 buildings included office complexes, law courts, laboratories, police stations and garages. This highly successful program was extended in 1981, and similar programs were introduced for non-profit institutional facilities such as: hospitals, schools, colleges, universities, homes for children and the aged, and museums. By the end of 1985, the results of the \$37-million invested in the program included:

- Seventy-five per cent of government-owned building space saw reduced energy use of 29 per cent.
- Schools and universities had reduced oil use by 152 million litres per year.
- Colleges had cut energy use by 31 per cent.
- Overall, energy costs had been reduced by more than \$16-million, annually. Cumulative cost-avoidance exceeds \$85-million.

In addition to financial assistance, the above programs provided technical advice and building operator training.

As the programs are due to end shortly, and cost-effective energy improvements costing more than \$500-million remain to be implemented, the Ministry of Energy will introduce new, far-reaching programs for the same sectors before the end of 1986.

PROGRAM COMPONENTS

- **Awareness:** This component will include: seminars for client group, senior management, and building operators/managers; reference manuals, videos, case studies and newsletters.
- **Financing:** This will include financial assistance for the smaller, shorter payback projects and information and advice on Energy Service Contracting.
- **Technology Demonstrations:** The Ministry of Energy will share the cost of selective demonstrations of new technology with representative energy users.

Training: The Ministry of Energy will provide comprehensive, ongoing training workshops for building operators and managers.



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ELIGIBLE CLIENT GROUPS:

- Ministries occupying government-owned facilities
- . Public hospitals
- . School boards and public and separate schools
- . Colleges and universities
- . Homes for ages, day care centres, halfway homes, Children's Aid Society facilities
- . Tourism and recreational facilities

ONTARIO GOVERNMENT FLEET

BACKGROUND

The Ontario Government fleet performs a wide variety of functions, ranging from gravel hauling to transportation for staff travelling on business. The fleet consumes almost 70 million litres of fuel each year, and currently consists of approximately 9,400 vehicles, in the following proportions:

. cars	1500
. pick-ups, vans	3000
. heavy trucks	2000
. OPP	2000
. ambulances	700
. other vehicles	<u>200</u>
	9400

Considerable progress has been made in downsizing the fleet, in converting heavy vehicles to diesel power, and in converting medium-sized vehicles to alternative transportation fuels. However, more can be done to ensure that the Government of Ontario fleet is as fuel efficient as possible.

PROGRAM DESCRIPTION

The first step has been taken: by 1992, the light-duty vehicles in the government fleet (4,500 cars, pick-ups, and vans) will have an average fuel consumption rating of 10.0L/100 km. In addition, a program is being put in place to increase the number of vehicles using gaseous fuels or methanol blends (currently about 550) and to reduce the overall use of fuel through advanced driver training and fleet management techniques.

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BACKGROUND

Commercial buildings -- such as offices, stores, warehouses and hotels -- use about 13 per cent of Ontario's energy, and the potential for energy and cost savings in these buildings is tremendous.

New commercial buildings today consume about one-quarter of the energy used by new buildings constructed just 10 years ago. As well, there is considerable potential for savings in existing buildings, where low-cost or no-cost operation improvements can lead to savings of up to 30 per cent per year.

Over the past eight years, the Ministry of Energy has worked with building owners and managers, through the Downtown Energy Forum.

Since 1978, the ministry has offered the Downtown Energy Forum, a voluntary program to promote energy management in large commercial building complexes in downtown Toronto and Ottawa. During 1984-85, some 57 firms, representing 3.6 million square metres of office space in 121 buildings in Ottawa and Toronto, reported savings of up to \$10-million a year. Earlier this year four highly successful workshops were held in four cities: Oshawa, Niagara Falls, London and Sudbury.

PROGRAM DESCRIPTION

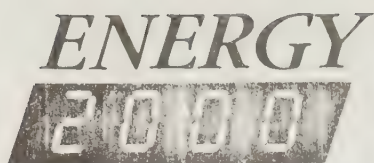
Through workshops and annual forums, technical advice, information and promotional material, and other forms of assistance, the program is designed to get commercial building owners and managers as well as managers of municipal-owned buildings, in medium-sized cities more involved in effective energy management of buildings operations.

The expanded Commercial Buildings Energy Management Program will be introduced to 20 medium-sized municipalities through the Cities Energy Forum, and to seven Metro Toronto area municipalities, through the Metro Energy Forum, by 1990, under the theme "Invest in Energy Management and Save."

Cities Energy Forum and Metro Energy Forum

- . Requires voluntary commitment at the executive level from participating organizations.
- . Training Workshops and annual forums for building owners, managers and operators;
- . Training material, technical reports and case studies;
- . Subsidy of \$15,000 annually for three years, to each community, to hire local energy technical advisors and provide direct consultation to program participants and to monitor results.





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AGRICULTURAL ENERGY SERVICES PROGRAM

BACKGROUND

Agriculture makes a major contribution to Ontario's economy. Besides providing Ontario residents with high-quality, reasonably-priced food, our farmers export more than \$3-billion in products every year -- making agricultural products our second-largest export item.

One way our farmers can maintain their competitiveness in the international marketplace and keep domestic food costs down is to reduce their energy costs and improve energy efficiency on the farm. Between 1981 and 1985, however, energy costs as a component of total agricultural costs in Ontario were on the increase -- from 19 per cent to 23 per cent of production costs. Although many cost-effective technologies now exist for improving energy use in agriculture, rising costs, an escalating debt load and low commodity prices are acting as barriers to energy investment on the farm.

PROGRAM DESCRIPTION

Through a three-year program designed to reduce the barriers to energy investment and encourage the adoption of more energy-efficient equipment and processes, the Ontario Ministry of Energy will offer a range of energy-related services to farmers, in co-operation with the Ministry of Agriculture and Food.

The program is designed to achieve the widespread use of proven, commercially-available technologies that will reduce energy costs and increase energy-related productivity in agriculture across the province.

This program takes advantage of established points of contact with farmers, and a staff of engineers across the province familiar with local farmers and conditions.

The program will feature demonstrations of proven technologies that have not yet been widely adopted; selected financial assistance for sharing of energy-efficient equipment; and provision of general technical advice on energy use.

PROGRAM COMPONENTS

1. Showcase Demonstration Program

Offers on-farm demonstration projects in four areas: waste heat recovery in livestock barns and greenhouses; development of high moisture grain storage systems to eliminate drying; use of microprocessors to monitor and control energy use; and development of alternate uses for tobacco kilns.

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2. Selected Financial Assistance Programs

- . Greenhouse Energy Efficiency Program, a five-year, \$5-million program jointly funded by the Ontario Ministry of Energy and the Ministry of Agriculture and Food. Growers can apply for grants of up to one-third (to a maximum of \$34,000) toward the capital and installation costs of some 20 proven energy productivity techniques.
- . Grain Dryer Retrofit Assistance Program, which offers grants of up to one-third to of the cost of retrofitting fully automatic controls onto existing grain dryers (to a maximum of \$30,000 per dryer), to commercial grain drying operators licensed under the Grain Financial Protection Program.

3. Farm Advisory Program

- . Designed to promote information transfer and outreach activities.
- . Information to be made available includes technical reports about on-farm energy projects, fact sheets and general publications relating to energy use on the farm. Program will offer information on available and developing technologies for grain drying, produce cooling and storage, and integrated pest management.
- . Includes the Farm Energy Audit Study of selected farms, which provides a computerized assessment of energy use in all aspects of production, and makes recommendations for improvements.
- . Will offer regional training courses to local contractors on installation and servicing of heat pumps for agricultural use.
- . Offers a Speaker's Bureau through which agricultural energy experts are made available to make presentations at farm meetings, as well as training sessions for agricultural extension staff.

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NEWS RELEASE

FOR IMMEDIATE RELEASE:

September 25, 1986

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Ontario Committed to Greater Energy Conservation and Efficiency

TORONTO -- A policy paper and program information package, outlining the Ontario government's commitment to energy conservation and efficiency in five key areas of the economy, was released today by Energy Minister Vincent G. Kerrio.

The minister pointed out that Ontario has made progress in energy-saving over the past decade. Nevertheless, significant further improvements are essential if Ontario is to remain competitive with its trading partners as they advance in energy efficiency. The challenge is to overcome complacency towards conservation during a period of lower energy prices.

"Ontario's wholesale energy bill was more than \$14-billion in 1985 -- or almost 10 per cent of all the goods and services we consume," Mr. Kerrio said.

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"To ensure we can meet tomorrow's energy needs and to help insulate us from future price increases, we will focus on making specific improvements in the residential, commercial, industrial, transportation and agricultural areas," he said.

"Government leadership is an important component of our energy strategy for Ontario, and we intend to be very aggressive about improving the efficiency of our own energy use," Mr. Kerrio continued.

"To demonstrate this commitment the government has set two improvement targets for its own operations: to achieve a further 10 per cent improvement in the energy efficiency of government buildings by 1992; and to improve the fuel economy rating of the government light vehicle fleet to an average of ten litres per one hundred kilometres by 1992."

The policy paper released today, known as An Energy Efficient Ontario -- Toward the Year 2000, outlines the framework for the government's energy conservation strategy from now to the year 2000. The paper describes the government's role in energy conservation as primarily one of helping and coordinating, providing advice, technical information and limited financial support to energy users in needed areas.

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To effect this, the government will promote energy-efficient technologies, and emphasize long-lasting improvements in energy efficiency. The paper identifies the key players and components in making Ontario an energy-efficient province. In particular, the government

acknowledges the potential role of energy utilities, including Ontario Hydro, and the important contribution that can be achieved through electricity conservation.

In the residential sector, the government will encourage the building of new housing units with higher levels of energy efficiency, and the use of high efficiency heating systems. It will also encourage upgrading the energy efficiency of existing homes and seek means to improve the energy efficiency of household appliances.

In the commercial sector, the government will encourage energy efficiency through the promotion of higher standards for energy efficiency in new commercial buildings, and through improvements to the operation of building systems.

The government will promote energy efficiency in the industrial sector by offering energy audits, and by encouraging industry to give higher priority to energy operating costs, to make cost-effective improvements to buildings, and to maintain fuel flexibility.

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Ontario committed -- 4

The government will encourage car users and fleet owners to save energy by giving high priority to fuel costs, adopting better driving habits and purchasing fuel efficient vehicles.

The minister announced a package of new energy initiatives in five areas, including:

- o a three-year, \$5-million program to encourage energy conservation and efficiency in the residential area, and to make homeowners more aware of energy-saving opportunities;
- o a three-year, \$5-million industrial energy services program;
- o a three-year, \$5-million agricultural energy program, in co-operation with the Ministry of Agriculture and Food;
- o a program to encourage energy management in commercial buildings across the province; and
- o a consumer education program designed to teach Ontario schoolchildren about the importance of conservation and renewable energy in their daily lives.

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NOTE: Policy Paper An Energy Efficient Ontario -- Toward the Year 2000, available upon request by calling Ontario Ministry of Energy Enquiries Line, (416) 965-3246. Outside Toronto, call Operator Zenith 80420.

